



# **Kenwood USA Corporation**

## **Communications Sector**

### **Systems Division Product Price Guide**

#### **Kenwood USA Corporation**

Communications Sector - Systems Division  
3975 Johns Creek Court, Suite 400  
Suwanee, GA 30024-1265  
Phone 678-474-4700  
Toll Free 1-800-TRUNKING (878-6546)  
Systems Division Fax 678-957-1880

#### **Kenwood USA Corporation**

Corporate Offices  
2201 E. Dominguez Ave.  
P.O. Box 22745  
Long Beach, CA 90801-5745  
Phone 310-639-9000  
Fax 310-635-4957

**Kenwood USA Corporation**  
**Communications Sector**  
**Systems Division Product Price Guide**

## Table of Contents

<b>Band</b>	<b>Topic</b>	<b>Page</b>
	<i>Introduction</i>	<i>3</i>
<i>Low</i>	<i>TKB-6900 Series Conventional Simplex Base Stations</i>	<i>5</i>
<i>VHF</i>	<i>TKR-7400 Series High Performance Base Stations and Repeaters</i>	<i>8</i>
<i>VHF</i>	<i>TKR-7500 Series Base Stations and Repeaters</i>	<i>12</i>
<i>UHF</i>	<i>TKR-8400 Series High Performance Base Stations and Repeaters</i>	<i>16</i>
<i>UHF</i>	<i>TKR-8500 Series Base Stations and Repeaters</i>	<i>20</i>
<i>800/900</i>	<i>TKR-9300 and TKR-9301 Series Repeaters</i>	<i>24</i>
<i>VHF/UHF</i>	<i>TKR-751/851 and TKB-751/851 Low Power Base Stations and Repeaters</i>	<i>28</i>
	<i>Components</i>	<i>30</i>
	<i>System Design Worksheets</i>	
	<i>TKB-6900 Series</i>	<i>35</i>
	<i>TKR-7400 Series</i>	<i>36</i>
	<i>TKR-7500 Series</i>	<i>37</i>
	<i>TKR-8400 Series</i>	<i>38</i>
	<i>TKR-8500 Series</i>	<i>39</i>
	<i>TKR-9300/9301 Series</i>	<i>40</i>

# **Kenwood USA Corporation**

## **Communications Sector**

### **Systems Division Product Price Guide**

## **Introduction**

The Kenwood Systems price pages have been updated and now offer greater flexibility. This new format allows you to design a customized system that meets your end-user's needs. The price pages are organized by frequency band. You will find pages for Low Band, VHF, UHF, 800 and 900 MHz systems. Within a section, you will find a general description of each product line and what is included in its basic configuration. You will also find a listing of standard options for each system, and warnings that inform you when certain options may be incompatible with other options.

Individual components are listed in a separate section. On the components pages, you will find most of the items included in our systems. In the event you need individual components to be used as spares or to replace damaged or defective components in an existing system, use the component pages to order the necessary products.

All pricing is shown in United States Dollars. Products are shipped from either Suwanee, GA or Long Beach, CA. Shipping is not included in product pricing and will be added to the invoice unless otherwise specified.

### **NOTES:**

Vertical mounting spaces are specified as standard EIA rack units, or "RU"...each RU equals 1-3/4 inches.

Kenwood uses a 4 decimal method for specifying frequencies, appended by "N" or "W" to indicate the channel's bandwidth. For example, 453.2500N specifies narrowband; 453.2500W specifies wideband.

All CTCSS tones are specified in Hz; DCS coding is specified as either normal (N) or inverted ( I ) polarity. For example, 131.8 Hz describes a CTCSS tone; D732N describes a DCS code, normal polarity. Carrier squelch channels are designated as "CSQ".

All amplifier models used in our systems cover a specified range of transmit power levels. However, output power for most models is not field-adjustable and must be factory-set. Your required / licensed power level must therefore be indicated at time of order.

CWID (Morse Code station identifier) can be programmed at the time of initial tuning; please specify call sign. CW Messages (Morse Code messages / individual letters) and AUX I/O port assignments can also be programmed; please specify operational details and event triggering.

All tone termination panels are compatible with both EIA-standard and Motorola-standard tone formats (may require alternate firmware; please specify the desired format). For DC remote control, specify individual DC currents and their functions. Line driver, Tone and DC remote control line levels are 0dBm TX and 0dBm RX at 60% modulation, less CTCSS/DCS modulation, unless otherwise specified at time of order.

**Kenwood USA Corporation**  
**Communications Sector**  
**Systems Division Product Price Guide**

## **Introduction**

All LTR channels are designated using 2 digits; for example, 05 is LTR channel 5. All LTR systems use standard channel distribution numbering; for example 01 - 05 - 09 - 13 - 17 for a 5-channel system. Unless otherwise specified, LTR 01 will be set up as the system's master and designated as 01M.

Shock-mount shipping crates are assembled using klimps and 5/16" screws. Disassembly requires only a large screwdriver (to release the klimps), and a drill with a 5/16" hex-head nut driver bit. Systems installed in racks also have support bolts; a socket wrench with a 3/4" socket is required.

This equipment is heavy. Be sure to arrange for enough manpower and/or material handling equipment to safely move and install this equipment. Rack mounted systems must be secured to the floor and/or wall during installation to prevent tipping and injury or damage. All systems must be grounded to a common-point ground.

All conventional, LTR and basic MPT-1327 systems can be ordered using these price pages. PassPort and custom MPT-1327 configurations often vary by project. For assistance with these systems, or if you have a special application and the components are not listed in these price pages or on the order form, please contact Kenwood Systems for assistance.

## **LOW BAND**

### **TKB-6900 Series Conventional Simplex Base Stations**

#### **29.7 - 50.0 MHz**

#### **GENERAL:**

TKB-6900 Series Low Band Base Stations are built around the TK-690 high performance 110W radio. The TK-690 transceiver is mounted in a 2 RU enclosure which includes forced air cooling and option bays for two peripheral circuit boards. The basic configuration includes a 1 channel tone termination panel (2 or 4 wire audio) and a 40A 13.8VDC switching power supply (47-63Hz, 115 or 230VAC, 2 RU). The basic unit may be mounted in a cabinet or equipment rack and may be used either by itself (50W continuous duty or 110W at 20% duty cycle) or as a driver for an external continuous duty RF amplifier (100W or 300W).

#### **OPTIONS:**

Power supply options include battery backup with integrated SmartCharger and Low Voltage Disconnect for the basic and 100W configurations. Cabinet options are 20 RU (42") and 40 RU (77") locking cabinets; 17 RU (3') or 45 RU (7') open equipment racks are also available. External connections are RJ-11 for phone line, DB-25 for access to the internal chassis bus, type N-female for RF. T-R simplex antenna switching is included in the basic unit as well as in all external amplifiers. Other configurations are also available on a special order basis; contact your Kenwood Systems Regional Sales Manager for more details.

#### **ORDERING INSTRUCTIONS:**

**Step 1:** Determine the frequency sub-band:

K1 = 29.7 - 37.0MHz    Order **TKB6900SK1** basic configuration  
K2 = 35.0 - 43.0MHz    Order **TKB6900SK2** basic configuration  
K3 = 40.0 - 50.0MHz    Order **TKB6900SK3** basic configuration

**Step 2:** Select an RF amplifier option.

**Step 3:** Select a power supply option.

**Step 4:** Select the desired mounting configuration.

**Step 5:** Select optional equipment or configuration changes.

**Step 6:** Add the basic configuration (Step 1) to the desired RF amplifier, power supply, mounting configuration and optional equipment (Steps 2-5) to determine configuration pricing. Specify frequencies and tone assignments with order.

## LOW BAND

### TKB-6900 Series Conventional Simplex Base Stations

29.7 - 50.0 MHz

LIST

#### STEP 1 -- TKB-6900 BASIC CONFIGURATION:

TKB6900SK1 BASIC CONFIGURATION, 29.7 - 37.0MHz	\$3,202
TKB6900SK2 BASIC CONFIGURATION, 35.0 - 43.0MHz	\$3,202
TKB6900SK3 BASIC CONFIGURATION, 40.0 - 50.0MHz	\$3,202
TKB-6900 low band base station basic configuration includes 40A DC power supply and 1 channel tone termination panel. Base station provides 50W continuous duty, 110W at 20% duty cycle. Includes factory tuning and staging; ships unmounted.	

#### STEP 2 -- RF AMPLIFIER OPTIONS:

<b>OPTION KSGA110B: 100W CONTINUOUS DUTY RF AMPLIFIER UPGRADE</b>	\$2,086
Upgrade to include external 100W continuous duty RF amplifier, 29.7-50.0MHz. Amplifier occupies 4 RU and is powered by the 40A 13.8VDC power supply included in the basic station configuration. Includes factory tuning, RF cables, wiring and internal antenna T-R relay.	
<b>OPTION KSGA130B: 300W CONTINUOUS DUTY RF AMPLIFIER UPGRADE</b>	\$10,582
Upgrade to include external 300W continuous duty RF amplifier, 29.7-50.0MHz. Amplifier occupies 5 RU and is powered by 120 / 240VAC power. Includes factory tuning, RF cables, wiring and internal antenna T-R relay. <b>Note:</b> This configuration cannot be used with the KSGPWR74 or KSGPWRB4 battery backup power supply options.	

#### STEP 3 -- POWER SUPPLY OPTIONS:

<b>OPTION KSGPWRX4: DELETE POWER SUPPLY</b>	-\$473
Delete 40A switching power supply from basic station configuration. <b>Note:</b> Not applicable when upgrading amplifier.	
<b>OPTION KSGPWR74: 13.8VDC, 70A POWER SUPPLY UPGRADE</b>	\$881
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, requires 2 RU. Replaces basic configuration 40A switching power supply. Will power up to 2 channels. <b>Note:</b> This item cannot be used with the KSGA130B Amplifier upgrade.	
<b>OPTION KSGPWRB4: 13.8VDC, 70A POWER SUPPLY WITH SMARTCHARGER UPGRADE</b>	\$1,263
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, built-in SmartCharger, low-voltage disconnect and solid state no-break transfer diodes, requires 2 RU, includes sealed fuse holder and fuses for battery (battery not included). Replaces basic configuration 40A switching power supply. Will power up to 2 channels. Gel cell batteries are available; contact your Kenwood Systems Regional Sales Manager for details. <b>Note:</b> This item cannot be used with the KSGA130B Amplifier upgrade.	

#### STEP 4 -- MOUNTING CONFIGURATION:

<b>OPTION KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK</b>	\$1,119
Standard 3' aluminum equipment rack providing 17 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMRCK7: 45 RU (7') ALUMINUM EQUIPMENT RACK</b>	\$1,207
Standard 7' aluminum equipment rack providing 45 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB2: 20 RU (42") LOCKING CABINET</b>	\$2,050
Locking cabinet, 42"H x 22"W x 24"D, providing 20 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB4: 40 RU (77") LOCKING CABINET</b>	\$2,783
Locking cabinet, 77"H x 22"W x 24"D, providing 40 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	

**LOW BAND**  
**TKB-6900 Series Conventional Simplex Base Stations**  
**29.7 - 50.0 MHz**

**LIST**

**OPTION KSGMCABT: CABINET SOLID TOP UPGRADE** \$59

Cabinet upgrade to solid top panel; replaces standard perforated top panel.

**OPTION KSGMCABF: CABINET FAN TOP UPGRADE** \$433

Cabinet upgrade to solid top panel with 10" diameter 120VAC fan, replaces standard perforated top panel. Can be mounted above panel or below; requires 2 RU clearance inside cabinet if mounted below panel.

**OPTION KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE** \$89

Cabinet upgrade to add solid interior bottom panel inside cabinet, with 5 cable access openings (includes grommets and plugs).

**STEP 5 -- OPTIONAL EQUIPMENT CONFIGURATIONS:**

**WIRELINE REMOTE CONTROL OPTIONS:**

**OPTION KSGTN02B: 2 CHANNEL TONE TERMINATION PANEL UPGRADE** \$70

Upgrade to 2 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, installs in one station option bay.

**OPTION KSGTN10B: 10 CHANNEL DISCRETE TONE TERMINATION PANEL UPGRADE** \$594

Upgrade to 10 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, installs in one station option bay.

**OPTION KSGTN16B: 16 CHANNEL BCD TONE TERMINATION PANEL UPGRADE** \$403

Upgrade to 16 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.

**OPTION KSGTDC1B: 1 CHANNEL DC TERMINATION PANEL OPTION** \$0

Replace 1 channel tone termination channel with 1 channel DC termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, installs in one station option bay. Specify DC currents and function assignments at time of order.

**OPTION KSGTALD2: 600 Ohm BALANCED AUDIO LINE DRIVER** \$0

Replace 1 channel tone termination channel with 1 channel receive audio line driver panel, 2 wire 600 Ohm balanced output, installs in one station option bay.

**MISC STATION OPTIONS:**

**OPTION KSGVOT1A: SIGNAL-TO-NOISE VOTER** \$7,487

19" rack mount modular receiver voting comparator. Includes 1 station voter module for primary site; an additional station module is required for each additional voted receiver site.

**OPTION KSGVOT2A: ADDITIONAL STATION MODULE** \$1,263

Additional station voter module for signal-to-noise voting comparator. Occupies one card slot in KSGVOT1A chassis.

**OPTION KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER** \$641

Internal pilot tone generator for use with voting systems, supplies 600Ohm balanced two wire audio, installs in one station option bay.

**OPTION KSGOCWID: MORSE CODE IDENTIFIER** \$131

Addition to basic station, internal automatic Morse Code Identifier (CWID), installs inside basic station enclosure. Specify call sign at time of order. Includes programmer and cable.

## **VHF High Band**

### **TKR-7400 Series High Performance Base Stations and Repeaters**

**136 - 174 MHz**

#### **GENERAL:**

TKR-7400 series VHF High Band Base Stations and Repeaters are integrated systems using high performance TKR-740 repeaters. The TKR-740 repeater occupies 1 RU and may be used as a 5W standalone low power station or as a driver for an external power amplifier. A conventional controller and a digital POCSAG paging transmitter are built into the TKR-740 repeater; paging terminal is not included.

#### **OPTIONS:**

Conventional station options include wire line remote control and external RF amplifiers with built-in T-R antenna switching for simplex operation. Trunking system options include external controllers for LTR and basic MPT-1327 applications; PassPort systems are available by individual quotation. High performance 6 cavity BpBr duplexers are listed as options; multichannel combining systems are quoted on an individual system basis. Power supply options include battery backup with integrated SmartCharger and Low Voltage Disconnect for the 40W and 110W configurations.

Cabinet options are 20 RU (42") and 40 RU (77") locking cabinets; 17 RU (3') or 45 RU (7') open equipment racks are also available. The basic TKR-740 repeater includes a 20A 13.8VDC switching power supply (47-63Hz, 115 or 230VAC); 40W and 110W amplifier options include an upgrade to a 40A switching power supply (the 40A power supply occupies 2 RU). Custom configurations are also available; contact your Kenwood Systems Regional Sales Manager for more details.

#### **ORDERING INSTRUCTIONS:**

**Step 1:** Determine the frequency sub-band:

K1 = 146 - 162 MHz    Order TKR7400SK1 basic repeater

K2 = 158 - 174 MHz    Order TKR7400SK2 basic repeater

K3 = 136 - 150 MHz    Order TKR7400SK3 basic repeater

**Step 2:** Select an RF amplifier option.

**Step 3:** Select a Power Supply option.

**Step 4:** Select the desired mounting configuration.

**Step 5:** Select optional equipment or configuration changes.

**Step 6:** Add the basic configuration (Step 1) to the desired RF amplifier, power supply, mounting configuration and optional equipment (Steps 2-5) to determine configuration pricing. Specify frequencies, channel bandwidth and tone assignments with order.



## VHF High Band

### TKR-7400 Series High Performance Base Stations and Repeaters

#### 136 - 174 MHz

LIST

#### **STEP 1 -- TKR-7400 BASIC CONFIGURATION:**

<b>TKR7400SK1 BASIC CONFIGURATION, 146 - 162 MHz</b>	<b>\$3,258</b>
<b>TKR7400SK2 BASIC CONFIGURATION, 158 - 174 MHz</b>	<b>\$3,258</b>
<b>TKR7400SK3 BASIC CONFIGURATION, 136 - 150 MHz</b>	<b>\$3,258</b>
TKR-7400 repeater / base station basic configuration includes 5W continuous duty repeater and 20A DC power supply. Includes factory tuning and staging, ships unmounted.	

#### **STEP 2 -- RF AMPLIFIER OPTIONS:**

<b>OPTION KSGA204S: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	<b>\$1,608</b>
Repeater station upgrade to include external 40W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20A power supply). Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA204C: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	<b>\$1,901</b>
Base station upgrade to include external 40W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20 A power supply) and an integrated T-R antenna switching relay. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA211S: 110W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	<b>\$2,158</b>
Repeater station upgrade to include external 110W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20A power supply). Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA211C: 110W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	<b>\$2,222</b>
Base station upgrade to include external 110W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20 A power supply) and an integrated T-R antenna switching relay. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA225R: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	<b>\$7,843</b>
Repeater station upgrade to include external 250W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 5 RU and is powered by 120 / 240 VAC power. Includes factory tuning, wiring and RF cables. <b>Note:</b> This configuration cannot be used with the KSGPWR72 or KSGPWRB2 battery backup power supply options.	
<b>OPTION KSGA225B: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	<b>\$8,515</b>
Base station upgrade to include external 250W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 5 RU and is powered by 120 / 240VAC power. Includes factory tuning, wiring, RF cables and an integrated T-R antenna switching relay. <b>Note:</b> This configuration cannot be used with the KSGPWR72 or KSGPWRB2 battery backup power supply options.	

#### **STEP 3 -- POWER SUPPLY OPTIONS:**

<b>OPTION KSGPWRX2: DELETE POWER SUPPLY</b>	<b>-\$247</b>
Delete 20A switching power supply from basic station configuration. <b>Note:</b> Not applicable when upgrading amplifier or power supply.	
<b>OPTION KSGPWR72: 13.8VDC, 70A POWER SUPPLY UPGRADE</b>	<b>\$1,107</b>
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, requires 2 RU. Replaces basic configuration 20A switching power supply. Will power up to 2 channels. <b>Note:</b> This item cannot be used with the 250W Amplifier upgrade.	
<b>OPTION KSGPWRB2: 13.8VDC, 70A POWER SUPPLY WITH SMARTCHARGER UPGRADE</b>	<b>\$1,489</b>
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, built-in SmartCharger, low-voltage disconnect and solid state no-break transfer diodes, requires 2 RU, includes sealed fuse holder and fuses for battery (battery not included). Replaces basic configuration 20A switching power supply. Will power up to 2 channels. Gel cell batteries are available; contact your Kenwood Systems Regional Sales Manager for details. <b>Note:</b> This item cannot be used with the 250W Amplifier upgrade.	

## VHF High Band

### TKR-7400 Series High Performance Base Stations and Repeaters

136 - 174 MHz

LIST

#### **STEP 4 -- MOUNTING CONFIGURATION:**

<b>OPTION KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK</b>	\$1,119
Standard 3' aluminum equipment rack providing 17 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMRCK7: 45 RU (7') ALUMINUM EQUIPMENT RACK</b>	\$1,207
Standard 7' aluminum equipment rack providing 45 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB2: 20 RU (42") LOCKING CABINET</b>	\$2,050
Locking cabinet, 42"H x 22"W x 24"D, providing 20 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB4: 40 RU (77") LOCKING CABINET</b>	\$2,783
Locking cabinet, 77"H x 22"W x 24"D, providing 40 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCABT: CABINET SOLID TOP UPGRADE</b>	\$59
Cabinet upgrade to solid top panel; replaces standard perforated top panel.	
<b>OPTION KSGMCABF: CABINET FAN TOP UPGRADE</b>	\$433
Cabinet upgrade to solid top panel with 10" diameter 120VAC fan, replaces standard perforated top panel. Can be mounted above panel or below; requires 2 RU clearance inside cabinet if mounted below panel.	
<b>OPTION KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE</b>	\$89
Cabinet upgrade to add solid interior bottom panel inside cabinet, with 5 cable access openings (includes grommets and plugs).	

#### **STEP 5 -- OPTIONAL EQUIPMENT CONFIGURATIONS:**

##### **WIRELINE REMOTE CONTROL OPTIONS:**

<b>OPTION KSGTN01A: 1 CHANNEL TONE TERMINATION PANEL</b>	\$675
1 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN02A: 2 CHANNEL TONE TERMINATION PANEL</b>	\$745
2 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN10A: 10 CHANNEL DISCRETE TONE TERMINATION PANEL</b>	\$1,254
10 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN16A: 16 CHANNEL BCD TONE TERMINATION PANEL</b>	\$951
16 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTDC1A: 1 CHANNEL DC TERMINATION PANEL</b>	\$393
1 channel DC termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU. Specify DC currents and functions at time of order.	
<b>OPTION KSGTALD1: 600 Ohm BALANCED AUDIO LINE DRIVER</b>	\$353
Add 1 channel receive audio line driver panel, 2 wire 600 Ohm balanced output. Occupies 1 RU.	

## VHF High Band

### TKR-7400 Series High Performance Base Stations and Repeaters

136 - 174 MHz

	LIST
<b>EXTERNAL TRUNKING CONTROLLER OPTIONS:</b>	
<b>OPTION KSGC040L: LTR DISPATCH TRUNKING CONTROLLER</b> Raider LTR dispatch-only trunking controller. Includes setup, tuning and interface cable.	\$1,585
<b>OPTION KSGC050L: LTR DISPATCH &amp; INTERCONNECT TRUNKING CONTROLLER</b> Marauder LTR dispatch and interconnect trunking controller. Includes setup, tuning and interface cable.	\$2,978
<b>OPTION KSGC452L: LTR DISPATCH TRUNKING CONTROLLER</b> Model 452 LTR dispatch-only trunking controller. Includes setup, tuning and interface cable.	\$1,856
<b>OPTION KSGC459L: LTR DISPATCH &amp; INTERCONNECT TRUNKING CONTROLLER</b> Model 459 LTR dispatch and interconnect trunking controller. Includes setup, tuning and interface cable.	\$3,577
<b>OPTION KSGC807M: BASIC MPT-1327 TRUNKING CONTROLLER</b> Model 807 MPT trunking controller. Includes setup, tuning and interface cable.	\$7,382
<b>OPTION KSGC827M: BASIC MPT-1327 INTERCONNECT CONTROLLER</b> Model 827 MPT trunking controller. Includes setup, tuning and interface cable.	\$6,422
<b>OPTION KSGC844M: BASIC MPT-1327 MULTI-SITE CONTROLLER</b> Model 844 MPT multi-site controller. Includes setup, tuning and interface cable.	\$10,012
<b>OPTION KSGC427M: BASIC MPT-1327 PERIPHERAL EQUIPMENT INTERFACE</b> Model 427 MPT peripheral equipment with MAP-27 interface. Includes setup, tuning and interface cable.	\$10,012
<b>MISC STATION OPTIONS:</b>	
<b>OPTION KSGD2P1B: 6 CAVITY BpBr DUPLEXER, 400KHz MINIMUM SPACING, 150W</b> 6 cavity BpBr duplexer, 150W continuous duty, minimum TX-RX spacing 400 kHz. Includes RF cables.	\$3,244
<b>OPTION KSGOMOD1: BASIC SITE MANAGEMENT MODEM</b> Generic site management modem, 2400 bps, for use with LTR controllers, includes interface cable.	\$314
<b>OPTION KSGOMOD2: HIGH PERFORMANCE SITE MANAGEMENT MODEM</b> High performance site management modem designed for extra stability in high RF environments, 2400 bps, for use with LTR controllers, includes interface cable.	\$887
<b>OPTION KSGVOT1A: SIGNAL-TO-NOISE VOTER</b> 19" rack mount modular receiver voting comparator. Includes 1 station voter module for primary site; an additional station module is required for each additional voted receiver site.	\$7,487
<b>OPTION KSGVOT2A: ADDITIONAL STATION MODULE</b> Additional station voter module for signal-to-noise voting comparator. Occupies one card slot in KSGVOT1A chassis.	\$1,263
<b>OPTION KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER</b> Internal pilot tone generator for use with voting systems, supplies 600Ohm balanced two wire audio, installs in one station option bay.	\$641

Note: Pre-Selectors, Multi-Couplers, and Combiners are available by special order.  
Please contact your Kenwood Systems Regional Sales Manager for more information.

## **VHF High Band**

### **TKR-7500 Series Base Stations and Repeaters**

**136 - 174 MHz**

#### **GENERAL:**

TKR-7500 Series VHF High Band Base Stations and Repeaters are integrated systems using TKR-750 or TKR-751 repeaters depending on frequency sub-band. The TKR-750/751 repeater occupies 2 RU and may be used as a continuous-duty 25W standalone low power station or as a driver for an external power amplifier. A conventional controller is built into the TKR-750/751 repeaters.

#### **OPTIONS:**

Conventional station options include wire line remote control and external RF amplifiers with built-in T-R antenna switching for simplex operation. Trunking system options include external controllers for LTR and basic MPT-1327 applications; PassPort systems are available by individual quotation. High performance 6 cavity BpBr duplexers are listed as options; multichannel combining systems are quoted on an individual system basis. Power supply options include battery backup with integrated SmartCharger and Low Voltage Disconnect for the 40W and 110W configurations.

Cabinet options are 20 RU (42") and 40 RU (77") locking cabinets; 17 RU (3') or 45 RU (7') open equipment racks are also available. The basic TKR-750/751 repeater includes a 20A 13.8VDC switching power supply (47-63Hz, 115 or 230VAC); 40W and 110W amplifier options include an upgrade to a 40A switching power supply (the 40A power supply occupies 2 RU). Custom configurations are also available; contact your Kenwood Systems Regional Sales Manager for more details.

#### **ORDERING INSTRUCTIONS:**

**Step 1:** Determine the frequency sub-band:

- K1 = 146 - 174 MHz    Order TKR7510SK1 basic repeater
- K2 = 136 - 146 MHz    Order TKR7500SK2 basic repeater

**Step 2:** Select an RF amplifier option.

**Step 3:** Select a Power Supply option.

**Step 4:** Select the desired mounting configuration.

**Step 5:** Select optional equipment or configuration changes.

**Step 6:** Add the basic configuration (Step 1) to the desired RF amplifier, power supply, mounting configuration and optional equipment (Steps 2-5) to determine configuration pricing. Specify frequencies, channel bandwidth and tone assignments with order.

## VHF High Band

### TKR-7500 Series Base Stations and Repeaters

#### 136 - 174 MHz

**LIST**

#### **STEP 1 -- TKR-7500 BASIC CONFIGURATION:**

<b>TKR7510SK1 BASIC CONFIGURATION, 146 - 174 MHz</b>	<b>\$1,727</b>
<b>TKR7500SK2 BASIC CONFIGURATION, 136 - 146 MHz</b>	<b>\$2,035</b>
TKR-7500 series repeater / base station basic configuration includes 25W continuous duty repeater and 20A DC power supply. Includes factory tuning and staging, ships unmounted.	

#### **STEP 2 -- RF AMPLIFIER OPTIONS:**

<b>OPTION KSGA204R: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	<b>\$1,735</b>
Repeater station upgrade to include external 40W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20A power supply). Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA204B: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	<b>\$2,029</b>
Base station upgrade to include external 40W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20 A power supply) and an integrated T-R antenna switching relay. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA211R: 110W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	<b>\$2,285</b>
Repeater station upgrade to include external 110W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20A power supply). Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA211B: 110W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	<b>\$2,350</b>
Base station upgrade to include external 110W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20 A power supply) and an integrated T-R antenna switching relay. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA225R: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	<b>\$7,843</b>
Repeater station upgrade to include external 250W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 5 RU and is powered by 120 / 240 VAC power. Includes factory tuning, wiring and RF cables. <b>Note:</b> This configuration cannot be used with the KSGPWR72 or KSGPWRB2 battery backup power supply options.	
<b>OPTION KSGA211B: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	<b>\$8,515</b>
Base station upgrade to include external 250W continuous duty RF amplifier, 136-174MHz. Amplifier occupies 5 RU and is powered by 120 / 240VAC power. Includes factory tuning, wiring, RF cables and an integrated T-R antenna switching relay. <b>Note:</b> This configuration cannot be used with the KSGPWR72 or KSGPWRB2 battery backup power supply options.	

#### **STEP 3 -- POWER SUPPLY OPTIONS:**

<b>OPTION KSGPWRX2: DELETE POWER SUPPLY</b>	<b>-\$247</b>
Delete 20A switching power supply from basic station configuration. <b>Note:</b> Not applicable when upgrading amplifier or power supply.	
<b>OPTION KSGPWR72: 13.8VDC, 70A POWER SUPPLY UPGRADE</b>	<b>\$1,107</b>
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, requires 2 RU. Replaces basic configuration 20A switching power supply. Will power up to 2 channels. <b>Note:</b> This item cannot be used with the 250W Amplifier upgrade.	
<b>OPTION KSGPWRB2: 13.8VDC, 70A POWER SUPPLY WITH SMARTCHARGER UPGRADE</b>	<b>\$1,489</b>
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, built-in SmartCharger, low-voltage disconnect and solid state no-break transfer diodes, requires 2 RU, includes sealed fuse holder and fuses for battery (battery not included). Replaces basic configuration 20A switching power supply. Will power up to 2 channels. Gel cell batteries are available; contact your Kenwood Systems Regional Sales Manager for details. <b>Note:</b> This item cannot be used with the 250W Amplifier upgrade.	

## VHF High Band

### TKR-7500 Series Base Stations and Repeaters

136 - 174 MHz

LIST

#### **STEP 4 -- MOUNTING CONFIGURATION:**

<b>OPTION KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK</b>	<b>\$1,119</b>
Standard 3' aluminum equipment rack providing 17 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMRCK7: 45 RU (7') ALUMINUM EQUIPMENT RACK</b>	<b>\$1,207</b>
Standard 7' aluminum equipment rack providing 45 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB2: 20 RU (42") LOCKING CABINET</b>	<b>\$2,050</b>
Locking cabinet, 42"H x 22"W x 24"D, providing 20 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB4: 40 RU (77") LOCKING CABINET</b>	<b>\$2,783</b>
Locking cabinet, 77"H x 22"W x 24"D, providing 40 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCABT: CABINET SOLID TOP UPGRADE</b>	<b>\$59</b>
Cabinet upgrade to solid top panel; replaces standard perforated top panel.	
<b>OPTION KSGMCABF: CABINET FAN TOP UPGRADE</b>	<b>\$433</b>
Cabinet upgrade to solid top panel with 10" diameter 120VAC fan, replaces standard perforated top panel. Can be mounted above panel or below; requires 2 RU clearance inside cabinet if mounted below panel.	
<b>OPTION KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE</b>	<b>\$89</b>
Cabinet upgrade to add solid interior bottom panel inside cabinet, with 5 cable access openings (includes grommets and plugs).	

#### **STEP 5 -- OPTIONAL EQUIPMENT CONFIGURATIONS:**

##### **WIRELINE REMOTE CONTROL OPTIONS:**

<b>OPTION KSGTN01A: 1 CHANNEL TONE TERMINATION PANEL</b>	<b>\$675</b>
1 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN02A: 2 CHANNEL TONE TERMINATION PANEL</b>	<b>\$745</b>
2 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN10A: 10 CHANNEL DISCRETE TONE TERMINATION PANEL</b>	<b>\$1,254</b>
10 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN16B: 16 CHANNEL BCD TONE TERMINATION PANEL</b>	<b>\$951</b>
16 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTDC1A: 1 CHANNEL DC TERMINATION PANEL</b>	<b>\$393</b>
1 channel DC termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU. Specify DC currents and functions at time of order.	
<b>OPTION KSGTALD1: 600 Ohm BALANCED AUDIO LINE DRIVER</b>	<b>\$353</b>
Add 1 channel receive audio line driver panel, 2 wire 600 Ohm balanced output. Occupies 1 RU.	

**VHF High Band**  
**TKR-7500 Series Base Stations and Repeaters**  
**136 - 174 MHz**

	LIST
<b>EXTERNAL TRUNKING CONTROLLER OPTIONS:</b>	
<b>OPTION KSGC040L: LTR DISPATCH TRUNKING CONTROLLER</b> Raider LTR dispatch-only trunking controller. Includes setup, tuning and interface cable.	\$1,585
<b>OPTION KSGC050L: LTR DISPATCH &amp; INTERCONNECT TRUNKING CONTROLLER</b> Marauder LTR dispatch and interconnect trunking controller. Includes setup, tuning and interface cable.	\$2,978
<b>OPTION KSGC452L: LTR DISPATCH TRUNKING CONTROLLER</b> Model 452 LTR dispatch-only trunking controller. Includes setup, tuning and interface cable.	\$1,856
<b>OPTION KSGC459L: LTR DISPATCH &amp; INTERCONNECT TRUNKING CONTROLLER</b> Model 459 LTR dispatch and interconnect trunking controller. Includes setup, tuning and interface cable.	\$3,577
<b>OPTION KSGC807M: BASIC MPT-1327 TRUNKING CONTROLLER</b> Model 807 MPT trunking controller. Includes setup, tuning and interface cable.	\$7,385
<b>OPTION KSGC827M: BASIC MPT-1327 INTERCONNECT CONTROLLER</b> Model 827 MPT trunking controller. Includes setup, tuning and interface cable.	\$6,422
<b>OPTION KSGC844M: BASIC MPT-1327 MULTI-SITE CONTROLLER</b> Model 844 MPT multi-site controller. Includes setup, tuning and interface cable.	\$10,012
<b>OPTION KSGC427M: BASIC MPT-1327 PERIPHERAL EQUIPMENT INTERFACE</b> Model 427 MPT peripheral equipment with MAP-27 interface. Includes setup, tuning and interface cable.	\$10,012
<b>MISC STATION OPTIONS:</b>	
<b>OPTION KSGD2P1B: 6 CAVITY BpBr DUPLEXER, 400KHz MINIMUM SPACING, 150W</b> 6 cavity BpBr duplexer, 150W continuous duty, minimum TX-RX spacing 400 kHz. Includes RF cables.	\$3,244
<b>OPTION KSGOMOD1: BASIC SITE MANAGEMENT MODEM</b> Generic site management modem, 2400 bps, for use with LTR controllers, includes interface cable.	\$314
<b>OPTION KSGOMOD2: HIGH PERFORMANCE SITE MANAGEMENT MODEM</b> High performance site management modem designed for extra stability in high RF environments, 2400 bps, for use with LTR controllers, includes interface cable.	\$887
<b>OPTION KSGVOT1A: SIGNAL-TO-NOISE VOTER</b> 19" rack mount modular receiver voting comparator. Includes 1 station voter module for primary site; an additional station module is required for each additional voted receiver site.	\$7,487
<b>OPTION KSGVOT2A: ADDITIONAL STATION MODULE</b> Additional station voter module for signal-to-noise voting comparator. Occupies one card slot in KSGVOT1A chassis.	\$1,263
<b>OPTION KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER</b> Internal pilot tone generator for use with voting systems, supplies 600Ohm balanced two wire audio, installs in one station option bay.	\$641

Note: Pre-Selectors, Multi-Couplers, and Combiners are available by special order.  
Please contact your Kenwood Systems Regional Sales Manager for more information.

**UHF**  
**TKR-8400 Series High Performance Base Stations and Repeaters**  
**450 - 512 MHz**

**GENERAL:**

TKR-8400 series UHF High Performance Base Stations and Repeaters are integrated systems using high performance TKR-840 repeaters. The TKR-840 repeater occupies 1 RU and may be used as a 5W standalone low power station or as a driver for an external power amplifier. A conventional controller and a digital POCSAG paging transmitter are built into the TKR-840 repeater; paging terminal is not included.

**OPTIONS:**

Conventional station options include wire line remote control and external RF amplifiers with built-in T-R antenna switching for simplex operation. Trunking system options include external controllers for LTR and basic MPT-1327 applications; PassPort systems are available by individual quotation. High performance 6 cavity BpBr duplexers are listed as options; multichannel combining systems are quoted on an individual system basis. Power supply options include battery backup with integrated SmartCharger and Low Voltage Disconnect for the 40W and 100W configurations.

Cabinet options are 20 RU (42") and 40 RU (77") locking cabinets; 17 RU (3') or 45 RU (7') open equipment racks are also available. The basic TKR-840 repeater includes a 20A 13.8VDC switching power supply (47-63Hz, 115 or 230VAC); 40W and 100W amplifier options include an upgrade to a 40A switching power supply (the 40A power supply occupies 2 RU). Custom configurations are also available; contact your Kenwood Systems Regional Sales Manager for more details.

**ORDERING INSTRUCTIONS:**

**Step 1:** Determine the frequency sub-band:

K1 = 450 - 480 MHz    Order TKR8400SK1 basic repeater

K2 = 480 - 512 MHz    Order TKR8400SK2 basic repeater

**Step 2:** Select an RF amplifier option.

**Step 3:** Select a Power Supply option.

**Step 4:** Select the desired mounting configuration.

**Step 5:** Select optional equipment or configuration changes.

**Step 6:** Add the basic configuration (Step 1) to the desired RF amplifier, power supply, mounting configuration and optional equipment (Steps 2-5) to determine configuration pricing. Specify frequencies, channel bandwidth and tone assignments with order.



## UHF

### TKR-8400 Series High Performance Base Stations and Repeaters 450 - 512 MHz

LIST

#### **STEP 1 -- TKR-8400 BASIC CONFIGURATION:**

<b>TKR8400SK1 BASIC CONFIGURATION, 450 - 480 MHz</b>	<b>\$3,347</b>
<b>TKR8400SK2 BASIC CONFIGURATION, 480 - 512 MHz</b>	<b>\$3,347</b>
TKR-8400 repeater / base station basic configuration includes 5W continuous duty repeater and 20A DC power supply. Includes factory tuning and staging, ships unmounted.	

#### **STEP 2 -- RF AMPLIFIER OPTIONS:**

<b>OPTION KSGA304S: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	<b>\$1,547</b>
Repeater station upgrade to include external 40W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20A power supply). Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA304C: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	<b>\$1,617</b>
Base station upgrade to include external 40W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20 A power supply) and an integrated T-R antenna switching relay. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA310S: 100W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	<b>\$2,086</b>
Repeater station upgrade to include external 100W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20A power supply). Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA310C: 100W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	<b>\$2,456</b>
Base station upgrade to include external 100W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20 A power supply) and an integrated T-R antenna switching relay. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA325R: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	<b>\$11,452</b>
Repeater station upgrade to include external 250W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 5 RU and is powered by 120 / 240 VAC power. Includes factory tuning, wiring and RF cables. <b>Note:</b> This configuration cannot be used with the KSGPWR72 or KSGPWRB2 battery backup power supply options.	
<b>OPTION KSGA325B: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	<b>\$12,143</b>
Base station upgrade to include external 250W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 5 RU and is powered by 120 / 240VAC power. Includes factory tuning, wiring, RF cables and an integrated T-R antenna switching relay. <b>Note:</b> This configuration cannot be used with the KSGPWR72 or KSGPWRB2 battery backup power supply options.	

#### **STEP 3 -- POWER SUPPLY OPTIONS:**

<b>OPTION KSGPWRX2: DELETE POWER SUPPLY</b>	<b>-\$247</b>
Delete 20A switching power supply from basic station configuration. <b>Note:</b> Not applicable when upgrading amplifier or power supply.	
<b>OPTION KSGPWR72: 13.8VDC, 70A POWER SUPPLY UPGRADE</b>	<b>\$1,107</b>
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, requires 2 RU. Replaces basic configuration 20A switching power supply. Will power up to 2 channels. <b>Note:</b> This item cannot be used with the 250W Amplifier upgrade.	
<b>OPTION KSGPWRB2: 13.8VDC, 70A POWER SUPPLY WITH SMARTCHARGER UPGRADE</b>	<b>\$1,489</b>
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, built-in SmartCharger, low-voltage disconnect and solid state no-break transfer diodes, requires 2 RU, includes sealed fuse holder and fuses for battery (battery not included). Replaces basic configuration 20A switching power supply. Will power up to 2 channels. Gel cell batteries are available; contact your Kenwood Systems Regional Sales Manager for details. <b>Note:</b> This item cannot be used with the 250W Amplifier upgrade.	

## UHF

### TKR-8400 Series High Performance Base Stations and Repeaters

450 - 512 MHz

LIST

#### **STEP 4 -- MOUNTING CONFIGURATION:**

<b>OPTION KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK</b>	\$1,119
Standard 3' aluminum equipment rack providing 17 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMRCK7: 45 RU (7') ALUMINUM EQUIPMENT RACK</b>	\$1,207
Standard 7' aluminum equipment rack providing 45 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB2: 20 RU (42") LOCKING CABINET</b>	\$2,050
Locking cabinet, 42"H x 22"W x 24"D, providing 20 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB4: 40 RU (77") LOCKING CABINET</b>	\$2,783
Locking cabinet, 77"H x 22"W x 24"D, providing 40 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCABT: CABINET SOLID TOP UPGRADE</b>	\$59
Cabinet upgrade to solid top panel; replaces standard perforated top panel.	
<b>OPTION KSGMCABF: CABINET FAN TOP UPGRADE</b>	\$433
Cabinet upgrade to solid top panel with 10" diameter 120VAC fan, replaces standard perforated top panel. Can be mounted above panel or below; requires 2 RU clearance inside cabinet if mounted below panel.	
<b>OPTION KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE</b>	\$89
Cabinet upgrade to add solid interior bottom panel inside cabinet, with 5 cable access openings (includes grommets and plugs).	

#### **STEP 5 -- OPTIONAL EQUIPMENT CONFIGURATIONS:**

##### **WIRELINE REMOTE CONTROL OPTIONS:**

<b>OPTION KSGTN01A: 1 CHANNEL TONE TERMINATION PANEL</b>	\$675
1 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN02A: 2 CHANNEL TONE TERMINATION PANEL</b>	\$745
2 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN10A: 10 CHANNEL DISCRETE TONE TERMINATION PANEL</b>	\$1,254
10 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN16A: 16 CHANNEL BCD TONE TERMINATION PANEL</b>	\$951
16 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTDC1A: 1 CHANNEL DC TERMINATION PANEL</b>	\$393
1 channel DC termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU. Specify DC currents and functions at time of order.	
<b>OPTION KSGTALD1: 600 Ohm BALANCED AUDIO LINE DRIVER</b>	\$353
Add 1 channel receive audio line driver panel, 2 wire 600 Ohm balanced output. Occupies 1 RU.	

## UHF

### TKR-8400 Series High Performance Base Stations and Repeaters

450 - 512 MHz

#### LIST

#### EXTERNAL TRUNKING CONTROLLER OPTIONS:

<b>OPTION KSGC040L: LTR DISPATCH TRUNKING CONTROLLER</b>	\$1,585
Raider LTR dispatch-only trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC050L: LTR DISPATCH &amp; INTERCONNECT TRUNKING CONTROLLER</b>	\$2,978
Marauder LTR dispatch and interconnect trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC452L: LTR DISPATCH TRUNKING CONTROLLER</b>	\$1,856
Model 452 LTR dispatch-only trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC459L: LTR DISPATCH &amp; INTERCONNECT TRUNKING CONTROLLER</b>	\$3,577
Model 459 LTR dispatch and interconnect trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC807M: BASIC MPT-1327 TRUNKING CONTROLLER</b>	\$7,385
Model 807 MPT trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC827M: BASIC MPT-1327 INTERCONNECT CONTROLLER</b>	\$6,422
Model 827 MPT trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC844M: BASIC MPT-1327 MULTI-SITE CONTROLLER</b>	\$10,012
Model 844 MPT multi-site controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC427M: BASIC MPT-1327 PERIPHERAL EQUIPMENT INTERFACE</b>	\$10,012
Model 427 MPT peripheral equipment with MAP-27 interface. Includes setup, tuning and interface cable.	

#### MISC STATION OPTIONS:

<b>OPTION KSGD3P1B: 6 CAVITY BpBr DUPLEXER, 3MHz MINIMUM SPACING, 125W</b>	\$3,244
6 cavity BpBr duplexer, 125W continuous duty, minimum TX-RX spacing 3MHz. Includes RF cables.	
<b>OPTION KSGOMOD1: BASIC SITE MANAGEMENT MODEM</b>	\$314
Generic site management modem, 2400 bps, for use with LTR controllers, includes interface cable.	
<b>OPTION KSGOMOD2: HIGH PERFORMANCE SITE MANAGEMENT MODEM</b>	\$887
High performance site management modem designed for extra stability in high RF environments, 2400 bps, for use with LTR controllers, includes interface cable.	
<b>OPTION KSGVOT1A: SIGNAL-TO-NOISE VOTER</b>	\$7,487
19" rack mount modular receiver voting comparator. Includes 1 station voter module for primary site; an additional station module is required for each additional voted receiver site.	
<b>OPTION KSGVOT2A: ADDITIONAL STATION MODULE</b>	\$1,263
Additional station voter module for signal-to-noise voting comparator. Occupies one card slot in KSGVOT1A chassis.	
<b>OPTION KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER</b>	\$641
Internal pilot tone generator for use with voting systems, supplies 600Ohm balanced two wire audio, installs in one station option bay.	

Note: Pre-Selectors, Multi-Couplers, and Combiners are available by special order.  
Please contact your Kenwood Systems Regional Sales Manager for more information.

**UHF**  
**TKR-8500 Series Base Stations and Repeaters**  
**400 - 430 MHz and 450 - 512 MHz**

**GENERAL:**

TKR-8500 Series UHF Base Stations and Repeaters are integrated systems using TKR-850 or TKR-851 repeaters depending on frequency sub-band. The TKR-850/851 repeater occupies 2 RU and may be used as a continuous-duty 25W standalone low power station or as a driver for an external power amplifier. A conventional controller is built into the TKR-850/851 repeaters.

**OPTIONS:**

Conventional station options include wire line remote control and external RF amplifiers with built-in T-R antenna switching for simplex operation. Trunking system options include external controllers for LTR and basic MPT-1327 applications; PassPort systems are available by individual quotation. High performance 6 cavity BpBr duplexers are listed as options; multichannel combining systems are quoted on an individual system basis. Power supply options include battery backup with integrated SmartCharger and Low Voltage Disconnect for the 40W and 100W configurations.

Cabinet options are 20 RU (42") and 40 RU (77") locking cabinets; 17 RU (3') or 45 RU (7') open equipment racks are also available. The basic TKR-850/851 repeater includes a 20A 13.8VDC switching power supply (47-63Hz, 115 or 230VAC); 40W and 100W amplifier options include an upgrade to a 40A switching power supply (the 40A power supply occupies 2 RU). Custom configurations are also available; contact your Kenwood Systems Regional Sales Manager for more details.

**ORDERING INSTRUCTIONS:**

**Step 1:** Determine the frequency sub-band:

- K1 = 450 - 480 MHz    Order TKR8510SK1 basic repeater
- K2 = 480 - 512 MHz    Order TKR8500SK2 basic repeater
- K3 = 400 - 430 MHz    Order TKR8500SK3 basic repeater

**Step 2:** Select an RF amplifier option.

**Step 3:** Select a Power Supply option.

**Step 4:** Select the desired mounting configuration.

**Step 5:** Select optional equipment or configuration changes.

**Step 6:** Add the basic configuration (Step 1) to the desired RF amplifier, power supply, mounting configuration and optional equipment (Steps 2-5) to determine configuration pricing. Specify frequencies, channel bandwidth and tone assignments with order.

## UHF

### TKR-8500 Series Base Stations and Repeaters

400 - 430 MHz and 450 - 512 MHz

LIST

#### **STEP 1 -- TKR-8500 BASIC CONFIGURATION:**

<b>TKR8510SK1 BASIC CONFIGURATION, 450 - 480 MHz</b>	\$1,784
<b>TKR8500SK2 BASIC CONFIGURATION, 480 - 512 MHz</b>	\$2,140
<b>TKR8500SK3 BASIC CONFIGURATION, 400 - 430 MHz</b>	\$2,140
TKR-8500 series repeater / base station basic configuration includes 25W continuous duty repeater and 20A DC power supply. Includes factory tuning and staging, ships unmounted.	

#### **STEP 2 -- RF AMPLIFIER OPTIONS:**

<b>OPTION KSGA304R: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	\$1,675
Repeater station upgrade to include external 40W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20A power supply). Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA304B: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	\$1,712
Base station upgrade to include external 40W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20 A power supply) and a T-R antenna switching relay. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA310R: 100W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	\$2,214
Repeater station upgrade to include external 100W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20A power supply). Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA310B: 100W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	\$2,475
Base station upgrade to include external 100W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply (upgrade from basic 20 A power supply) and a T-R antenna switching relay. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA325R: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION</b>	\$11,452
Repeater station upgrade to include external 250W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 5 RU and is powered by 120 / 240 VAC power. Includes factory tuning, wiring and RF cables. <b>Note:</b> This configuration cannot be used with the KSGPWR72 or KSGPWRB2 battery backup power supply options.	
<b>OPTION KSGA325B: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION</b>	\$12,143
Base station upgrade to include external 250W continuous duty RF amplifier, 400-512MHz. Amplifier occupies 5 RU and is powered by 120 / 240VAC power. Includes factory tuning, wiring, RF cables and a T-R antenna switching relay. <b>Note:</b> This configuration cannot be used with the KSGPWR72 or KSGPWRB2 battery backup power supply options.	

#### **STEP 3 -- POWER SUPPLY OPTIONS:**

<b>OPTION KSGPWRX2: DELETE POWER SUPPLY</b>	-\$247
Delete 20A switching power supply from basic station configuration. <b>Note:</b> Not applicable when upgrading amplifier or power supply.	
<b>OPTION KSGPWR72: 13.8VDC, 70A POWER SUPPLY UPGRADE</b>	\$1,107
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, requires 2 RU. Replaces basic configuration 20A switching power supply. Will power up to 2 channels. <b>Note:</b> This item cannot be used with the 250W Amplifier upgrade.	
<b>OPTION KSGPWRB2: 13.8VDC, 70A POWER SUPPLY WITH SMARTCHARGER UPGRADE</b>	\$1,489
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, built-in SmartCharger, low-voltage disconnect and solid state no-break transfer diodes, requires 2 RU, includes sealed fuse holder and fuses for battery (battery not included). Replaces basic configuration 20A switching power supply. Will power up to 2 channels. Gel cell batteries are available; contact your Kenwood Systems Regional Sales Manager for details. <b>Note:</b> This item cannot be used with the 250W Amplifier upgrade.	

## UHF

### TKR-8500 Series Base Stations and Repeaters

400 - 430 MHz and 450 - 512 MHz

LIST

#### **STEP 4 -- MOUNTING CONFIGURATION:**

<b>OPTION KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK</b>	\$1,119
Standard 3' aluminum equipment rack providing 17 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMRCK7: 45 RU (7') ALUMINUM EQUIPMENT RACK</b>	\$1,207
Standard 7' aluminum equipment rack providing 45 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB2: 20 RU (42") LOCKING CABINET</b>	\$2,050
Locking cabinet, 42"H x 22"W x 24"D, providing 20 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB4: 40 RU (77") LOCKING CABINET</b>	\$2,783
Locking cabinet, 77"H x 22"W x 24"D, providing 40 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCABT: CABINET SOLID TOP UPGRADE</b>	\$59
Cabinet upgrade to solid top panel; replaces standard perforated top panel.	
<b>OPTION KSGMCABF: CABINET FAN TOP UPGRADE</b>	\$433
Cabinet upgrade to solid top panel with 10" diameter 120VAC fan, replaces standard perforated top panel. Can be mounted above panel or below; requires 2 RU clearance inside cabinet if mounted below panel.	
<b>OPTION KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE</b>	\$89
Cabinet upgrade to add solid interior bottom panel inside cabinet, with 5 cable access openings (includes grommets and plugs).	

#### **STEP 5 -- OPTIONAL EQUIPMENT CONFIGURATIONS:**

##### **WIRELINE REMOTE CONTROL OPTIONS:**

<b>OPTION KSGTN01A: 1 CHANNEL TONE TERMINATION PANEL</b>	\$675
1 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN02A: 2 CHANNEL TONE TERMINATION PANEL</b>	\$745
2 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN10A: 10 CHANNEL DISCRETE TONE TERMINATION PANEL</b>	\$1,254
10 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTN16A: 16 CHANNEL BCD TONE TERMINATION PANEL</b>	\$951
16 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTDC1A: 1 CHANNEL DC TERMINATION PANEL</b>	\$393
1 channel DC termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU. Specify DC currents and functions at time of order.	
<b>OPTION KSGTALD1: 600 Ohm BALANCED AUDIO LINE DRIVER</b>	\$353
Add 1 channel receive audio line driver panel, 2 wire 600 Ohm balanced output. Occupies 1 RU.	

## UHF

### TKR-8500 Series Base Stations and Repeaters

400 - 430 MHz and 450 - 512 MHz

#### LIST

#### **EXTERNAL TRUNKING CONTROLLER OPTIONS:**

<b>OPTION KSGC040L: LTR DISPATCH TRUNKING CONTROLLER</b>	\$1,585
Raider LTR dispatch-only trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC050L: LTR DISPATCH &amp; INTERCONNECT TRUNKING CONTROLLER</b>	\$2,978
Marauder LTR dispatch and interconnect trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC452L: LTR DISPATCH TRUNKING CONTROLLER</b>	\$1,856
Model 452 LTR dispatch-only trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC459L: LTR DISPATCH &amp; INTERCONNECT TRUNKING CONTROLLER</b>	\$3,577
Model 459 LTR dispatch and Interconnect trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC807M: BASIC MPT-1327 TRUNKING CONTROLLER</b>	\$7,385
Model 807 MPT trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC827M: BASIC MPT-1327 INTERCONNECT CONTROLLER</b>	\$6,422
Model 827 MPT trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC844M: BASIC MPT-1327 MULTI-SITE CONTROLLER</b>	\$10,012
Model 844 MPT multi-site controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC427M: BASIC MPT-1327 PERIPHERAL EQUIPMENT INTERFACE</b>	\$10,012
Model 427 MPT peripheral equipment with MAP-27 interface. Includes setup, tuning and interface cable.	

#### **MISC STATION OPTIONS:**

<b>OPTION KSGD3P1B: 6 CAVITY BpBr DUPLEXER, 3MHz MINIMUM SPACING, 125W</b>	\$3,244
6 cavity BpBr duplexer, 125W continuous duty, minimum TX-RX spacing 3MHz. Includes RF cables.	
<b>OPTION KSGOMOD1: BASIC SITE MANAGEMENT MODEM</b>	\$314
Generic site management modem, 2400 bps, for use with LTR controllers, includes interface cable.	
<b>OPTION KSGOMOD2: HIGH PERFORMANCE SITE MANAGEMENT MODEM</b>	\$887
High performance site management modem designed for extra stability in high RF environments, 2400 bps, for use with LTR controllers, includes interface cable.	
<b>OPTION KSGVOT1A: SIGNAL-TO-NOISE VOTER</b>	\$7,487
19" rack mount modular receiver voting comparator. Includes 1 station voter module for primary site; an additional station module is required for each additional voted receiver site.	
<b>OPTION KSGVOT2A: ADDITIONAL STATION MODULE</b>	\$1,263
Additional station voter module for signal-to-noise voting comparator. Occupies one card slot in KSGVOT1A chassis.	
<b>OPTION KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER</b>	\$641
Internal pilot tone generator for use with voting systems, supplies 600Ohm balanced two wire audio, installs in one station option bay.	

Note: Pre-Selectors, Multi-Couplers, and Combiners are available by special order.  
Please contact your Kenwood Systems Regional Sales Manager for more information.

## **800 - 900 MHz**

### **TKR-9300 and TKR-9301 Series Repeaters**

#### **GENERAL:**

The TKR-9300 800 MHz Repeaters and the TKR-9301 900 MHz Repeaters are integrated systems using TKR-900 and TKR-901 transceivers with external repeater controllers and RF amplifiers. The TKR-900/901 transceiver occupies 2 RU, has an RF output level of 250mW and is intended to be used as a driver for an external power amplifier. An external conventional or trunking controller is required to establish repeater operation. Internal high stability TCXOs and OCXOs eliminate the need for external reference oscillators.

#### **OPTIONS:**

Conventional station options include external controllers, wire line remote control and external RF amplifiers. Trunking system options include external LTR controllers; PassPort systems are available by individual quotation. High performance 4-cavity BpBr duplexers are listed as options; multichannel combining systems are quoted on an individual system basis. Power supply options include battery backup with integrated SmartCharger and Low Voltage Disconnect for the 40W and 80W configurations.

Cabinet options are 20 RU (42") and 40 RU (77") locking cabinets; 17 RU (3') or 45 RU (7') open equipment racks are also available. The basic TKR-900/901 transceiver is supplied as a component only (no power supply); 40W and 130W amplifier upgrades include a 20A power supply (the 130W amplifier's power supply is internal); 80W amplifier upgrades include a 40A switching power supply occupying 2 RU. Custom configurations are also available; contact your Kenwood Systems Regional Sales Manager for more details.

#### **ORDERING INSTRUCTIONS:**

**Step 1:** Determine the frequency sub-band:

800 MHz SMR channels = 806-821 / 851-866 MHz    Order **TKR9300SK1** basic transceiver

800 MHz NPSPAC channels = 821-824 / 866-869 MHz    Order **TKR9300SK2** basic transceiver

900 MHz SMR channels = 896-901 / 935-940 MHz    Order **TKR9301SK1** basic transceiver

**Step 2:** Select an RF amplifier option.

**Step 3:** Select a Power Supply option.

**Step 4:** Select the desired mounting configuration.

**Step 5:** Select optional equipment or configuration changes. (**Note:** External Controller is required.)

**Step 6:** Add the basic configuration (Step 1) to the desired RF amplifier, power supply, mounting configuration and optional equipment (Steps 2-5) to determine configuration pricing. Specify frequencies (or FCC channel numbers) and tone assignments with order.



## 800 - 900 MHz

### TKR-9300 and TKR-9301 Series Repeaters

**LIST**

#### **STEP 1 -- TKR-9300 BASIC CONFIGURATION:**

<b>TKR9300SK1 800 MHz BASIC TRANSCEIVER 806-821 / 851-866 MHz</b>	<b>\$2,333</b>
<b>TKR9300SK2 800 MHz BASIC TRANSCEIVER 821-824 / 866-869 MHz (NPSPAC)</b>	<b>\$2,918</b>
<b>TKR9301SK1 900 MHz BASIC TRANSCEIVER 896-901 / 935-940 MHz</b>	<b>\$2,893</b>

TKR-9300/9301 basic transceivers do not include power supply or station controller; ships unmounted.

#### **STEP 2 -- RF AMPLIFIER OPTIONS:**

<b>OPTION KSGA404A: 40W CONTINUOUS DUTY 800MHz RF AMPLIFIER UPGRADE</b>	<b>\$2,888</b>
Basic TKR900 transceiver upgrade to include external 40W continuous duty 800MHz RF amplifier. Amplifier occupies 4 RU and includes a 20A 13.8VDC power supply. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA404B: 40W CONTINUOUS DUTY 900MHz RF AMPLIFIER UPGRADE</b>	<b>\$2,888</b>
Basic TKR901 transceiver upgrade to include external 40W continuous duty 900MHz RF amplifier. Amplifier occupies 4 RU and includes a 20A 13.8VDC power supply. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA408A: 80W CONTINUOUS DUTY 800MHz RF AMPLIFIER UPGRADE</b>	<b>\$3,425</b>
Basic TKR900 transceiver upgrade to include external 80W continuous duty 800MHz RF amplifier. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA408B: 80W CONTINUOUS DUTY 900MHz RF AMPLIFIER UPGRADE</b>	<b>\$3,425</b>
Basic TKR901 transceiver upgrade to include external 80W continuous duty 900MHz RF amplifier. Amplifier occupies 4 RU and includes a 40A 13.8VDC power supply. Includes factory tuning, wiring and RF cables.	
<b>OPTION KSGA413A: 130W CONTINUOUS DUTY 800MHz RF AMPLIFIER UPGRADE</b>	<b>\$8,047</b>
Basic TKR900 transceiver upgrade to include external 130W continuous duty 800MHz RF amplifier. Amplifier occupies 5 RU and is powered by 120 / 240 VAC power. Includes 20A power supply for TKR900 and Controller, factory tuning, wiring and RF cables. <b>Note:</b> This configuration cannot be used with the KSGPWR72 or KSGPWRB2 battery backup power supply options.	
<b>OPTION KSGA413B: 130W CONTINUOUS DUTY 900MHz RF AMPLIFIER UPGRADE</b>	<b>\$8,047</b>
Basic TKR901 transceiver upgrade to include external 130W continuous duty 900MHz RF amplifier. Amplifier occupies 5 RU and is powered by 120 / 240 VAC power. Includes 20A power supply for TKR901 and Controller, factory tuning, wiring and RF cables. <b>Note:</b> This configuration cannot be used with the KSGPWR72 or KSGPWRB2 battery backup power supply options.	

#### **STEP 3 -- POWER SUPPLY OPTIONS:**

<b>OPTION KSGPWRX2: DELETE POWER SUPPLY</b>	<b>-\$247</b>
Delete switching power supply from basic station configuration. <b>Note:</b> Not applicable when upgrading amplifier or power supply.	
<b>OPTION KSGPWR72: 13.8VDC, 70A POWER SUPPLY UPGRADE</b>	<b>\$1,107</b>
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, requires 2 RU. Replaces switching power supply from amplifier configuration. <b>Note:</b> This item cannot be used with the 130W Amplifier upgrade.	
<b>OPTION KSGPWRB2: 13.8VDC, 70A POWER SUPPLY WITH SMARTCHARGER UPGRADE</b>	<b>\$1,489</b>
Power supply upgrade to 13.8VDC at 70A continuous duty switching power supply with front panel metering, built-in SmartCharger, low-voltage disconnect and solid state no-break transfer diodes, requires 2 RU, includes sealed fuse holder and fuses for battery (battery not included). Replaces switching power supply from amplifier configuration. Will power up to 2 channels. Gel cell batteries are available; contact your Kenwood Systems Regional Sales Manager for details. <b>Note:</b> This item cannot be used with the 130W Amplifier upgrade.	

## 800 - 900 MHz

### TKR-9300 and TKR-9301 Series Repeaters

LIST

#### **STEP 4 -- MOUNTING CONFIGURATION:**

<b>OPTION KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK</b>	<b>\$1,119</b>
Standard 3' aluminum equipment rack providing 17 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMRCK7: 45 RU (7') ALUMINUM EQUIPMENT RACK</b>	<b>\$1,207</b>
Standard 7' aluminum equipment rack providing 45 RU vertical mounting. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB2: 20 RU (42") LOCKING CABINET</b>	<b>\$2,050</b>
Locking cabinet, 42"H x 22"W x 24"D, providing 20 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCAB4: 40 RU (77") LOCKING CABINET</b>	<b>\$2,783</b>
Locking cabinet, 77"H x 22"W x 24"D, providing 40 RU vertical mounting, solid front door, louvered rear door, perforated top panel. Pricing includes equipment installation, hardware, cabling and wire management materials, and cushioned shipping crate.	
<b>OPTION KSGMCABT: CABINET SOLID TOP UPGRADE</b>	<b>\$59</b>
Cabinet upgrade to solid top panel; replaces standard perforated top panel.	
<b>OPTION KSGMCABF: CABINET FAN TOP UPGRADE</b>	<b>\$433</b>
Cabinet upgrade to solid top panel with 10" diameter 120VAC fan, replaces standard perforated top panel. Can be mounted above panel or below; requires 2 RU clearance inside cabinet if mounted below panel.	
<b>OPTION KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE</b>	<b>\$89</b>
Cabinet upgrade to add solid interior bottom panel inside cabinet, with 5 cable access openings (includes grommets and plugs).	

#### **STEP 5 -- OPTIONAL EQUIPMENT CONFIGURATIONS:**

##### **WIRELINE REMOTE CONTROL OPTIONS:**

<b>OPTION KSGTN01A: 1 CHANNEL TONE TERMINATION PANEL</b>	<b>\$675</b>
1 channel tone termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU.	
<b>OPTION KSGTDC1A: 1 CHANNEL DC TERMINATION PANEL</b>	<b>\$393</b>
1 channel DC termination panel, 2 or 4 wire, 600 Ohm balanced audio with monitor, occupies 1 RU. Specify DC currents and functions at time of order.	
<b>OPTION KSGTALD1: 600 Ohm BALANCED AUDIO LINE DRIVER</b>	<b>\$353</b>
Add 1 channel receive audio line driver panel, 2 wire 600 Ohm balanced output. occupies 1 RU.	

##### **EXTERNAL CONTROLLER OPTIONS:**

<b>OPTION KSGC038L: CONVENTIONAL REPEATER CONTROLLER</b>	<b>\$1,237</b>
Model 038 conventional repeater controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC040L: LTR DISPATCH TRUNKING CONTROLLER</b>	<b>\$1,585</b>
Raider LTR dispatch-only trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC050L: LTR DISPATCH &amp; INTERCONNECT TRUNKING CONTROLLER</b>	<b>\$2,978</b>
Marauder LTR dispatch and interconnect trunking controller. Includes setup, tuning and interface cable.	

## 800 - 900 MHz

### TKR-9300 and TKR-9301 Series Repeaters

	LIST
<b>OPTION KSGC452L: LTR DISPATCH TRUNKING CONTROLLER</b>	\$1,856
Model 452 LTR dispatch-only trunking controller. Includes setup, tuning and interface cable.	
<b>OPTION KSGC459L: LTR DISPATCH &amp; INTERCONNECT TRUNKING CONTROLLER</b>	\$3,577
Model 459 LTR dispatch and Interconnect trunking controller. Includes setup, tuning and interface cable.	
<b>MISC STATION OPTIONS:</b>	
<b>OPTION KSGD4P1A: 4 CAVITY 800MHz BpBr DUPLEXER, 45MHz SPACING, 150W</b>	\$2,463
4 cavity BpBr duplexer, 150W continuous duty, minimum TX-RX spacing 45MHz. Includes RF cables.	
<b>OPTION KSGD4P1B: 4 CAVITY 900MHz BpBr DUPLEXER, 39MHz SPACING, 150W</b>	\$2,463
4 cavity BpBr duplexer, 150W continuous duty, minimum TX-RX spacing 39MHz. Includes RF cables.	
<b>OPTION KSGOMOD1: BASIC SITE MANAGEMENT MODEM</b>	\$314
Generic site management modem, 2400 bps, for use with LTR controllers, includes interface cable.	
<b>OPTION KSGOMOD2: HIGH PERFORMANCE SITE MANAGEMENT MODEM</b>	\$887
High performance site management modem designed for extra stability in high RF environments, 2400 bps, for use with LTR controllers, includes interface cable.	
<b>OPTION KSGVOT1A: SIGNAL-TO-NOISE VOTER</b>	\$7,487
19" rack mount modular receiver voting comparator. Includes 1 station voter module for primary site; an additional station module is required for each additional voted receiver site.	
<b>OPTION KSGVOT2A: ADDITIONAL STATION MODULE</b>	\$1,263
Additional station voter module for signal-to-noise voting comparator. Occupies one card slot in KSGVOT1A chassis.	
<b>OPTION KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER</b>	\$641
Internal pilot tone generator for use with voting systems, supplies 600Ohm balanced two wire audio, installs in one station option bay.	

## **TKR-751/851 and TKB-751/851**

### **VHF and UHF Low Power Base Stations and Repeaters**

#### **GENERAL:**

The TKR-751/851 and TKB-751/851 Low Power Base Stations and Repeaters offer the following features.

1-25 Watt UHF and VHF	4 Watt Front Panel Speaker Audio
Continuous Duty	BCD Remote Channel Selection (4 Lines up to 15 channels)
19" Rack Mount	Programmable AUX Input/Output Functions
Wide/Narrow Band	Built-In Cooling Fan
Battery Back-Up	Macro-Function AUX Inputs
Back-Up Battery Warning/Operating Tone	Selectable Toggle or Momentary on AUX Input Ports
Rear Accessory/Logic Controller Connector	DTMF Over-The-Air Remote Function and AUX Output Control
Rear Test Speaker - AUX Connector	DSP Processed QT/DQT
High Stability Oscillators (TCXO)	DSP Processed Companded Audio
Windows 98/2000/ME/XP Compatible PC Programming and Tuning	QT/DQT Squelch-Tail Elimination
2 Years Parts and Labor Warranty	Flash Memory

#### **OPTIONS:**

When used as a Base Station, the TKB-751/851 also offers the following features.

16 Channel	6 Lighted PF Keys
Simplex or Full Duplex Operation	Local Takeover/Remote PF Key
Built-In Antenna Switch for Simplex/Single Antenna Operation	Channel Up/Down PF Keys
Priority Scan	Volume Control Knob
Remote Control Inputs	Front Microphone Jack
7-Segment, 2-Character Channel and Scan LED Indicator	Front Panel Speaker
2 Character Alphanumeric Channel Designator	Voice Encryption Option Port
Power/Transmit/Busy LED Indicators	

When used as a Repeater, the TKR-751/851 also offers the following features.

Full Duplex Operation	Courtesy Tone
Built-In 16 QT/DQT Tone/Code Pair Community	Repeat Enable/Disable
Repeater Operation	CW Transmitter ID
External Controller Interface	Repeat Hold Timer (hang timer)
Conventional or Trunking Controller Compatible	Time Out Timer

## TKR-751/851 and TKB-751/851

### VHF and UHF Low Power Base Stations and Repeaters

LIST

#### BASE STATIONS

##### TKB8510PS BASIC CONFIGURATION, 450 - 480 MHz

\$1,650

TKB8510PS base station basic configuration includes 1-25W, 100% Duty repeater, internally mounted power supply, programming and tuning. Ships unmounted.

##### TKBR7510PS BASIC CONFIGURATION, 146 - 174 MHz

\$1,550

TKBR7510PS base station basic configuration includes 1-25W, 100% Duty repeater, internally mounted power supply, programming and tuning. Ships unmounted.

#### REPEATERS

##### TKR8510PS BASIC CONFIGURATION, 450 - 480 MHz

\$1,650

TKR8510PS repeater basic configuration includes 1-25W, 100% Duty repeater, internally mounted power supply, programming and tuning. Ships unmounted.

##### TKR8510PSD BASIC CONFIGURATION, 450 - 480 MHz WITH INTERNAL DUPLEXER

\$2,316

TKR8510PSD repeater basic configuration includes 1-25W, 100% Duty repeater, internally mounted power supply, internal duplexer, programming and tuning. Ships unmounted.

##### TKR7510PS BASIC CONFIGURATION, 146 - 174 MHz

\$1,550

TKR7510PS repeater basic configuration includes 1-25W, 100% Duty repeater, internally mounted power supply, programming and tuning. Ships unmounted.

#### BASE STATION AND REPEATER OPTIONS

##### OPTION KSGPWRX1: DELETE POWER SUPPLY

-\$50

Delete internally mounted power supply from basic station configuration.

##### OPTION KSGMT30001: DESKTOP ENCLOSURE

\$150

The desktop enclosure is 16" deep by 20.50" wide by 5" high. It has a high-quality black laminate finish and is easily assembled with included hardware and tools.

##### OPTION KSGMS9009C: DESKTOP MICROPHONE

\$83

##### OPTION KSGMS98556: SERVICE MANUAL

\$37

##### OPTION KSGMS90066: PROGRAMMING SOFTWARE

\$65

##### OPTION KSGCB90046: PROGRAMMING CABLE

N/A

Note: For complete cabinet and rack enclosure options, see full Systems Division Price Pages

**Kenwood USA Corporation**  
**Communications Sector**  
**Systems Division Product Price Guide**

**Individual Component Items**

LIST

**Base Station Amplifiers (simplex, includes T-R switching relay)**

**Low Band**

Part Number	Output Power	Freq. Range	Compatibility	
KSGPA11100	100	29.7-50.0	TKB-6900 (specify frequency)	\$1,994
KSGPA11300	300	29.7-50.0	TKB-6900 (specify frequency)	\$10,490

**VHF High Band**

Part Number	Output Power	Freq. Range	Compatibility	
KSGPA12400	40	136-174	TKR740/751 (specify frequency)	\$1,707
KSGPA12500	40	136-174	TKR750 (specify frequency)	\$1,707
KSGPA12410	110	136-174	TKR740/751 (specify frequency)	\$2,031
KSGPA12510	110	136-174	TKR750 (specify frequency)	\$2,031
KSGPA12420	250	136-174	TKR740/751 (specify frequency)	\$8,431
KSGPA12520	250	136-174	TKR750 (specify frequency)	\$8,431

**UHF**

Part Number	Output Power	Freq. Range	Compatibility	
KSGPA13400	40	406-512	TKR840/851 (specify frequency)	\$1,426
KSGPA13500	40	406-512	TKR850 (specify frequency)	\$1,426
KSGPA13410	100	406-512	TKR840/851 (specify frequency)	\$2,262
KSGPA13510	100	406-512	TKR850 (specify frequency)	\$2,262
KSGPA13420	250	406-512	TKR840/851 (specify frequency)	\$12,058
KSGPA13520	250	406-512	TKR850 (specify frequency)	\$12,058

**Repeater Station Amplifiers**

**VHF High Band**

Part Number	Output Power	Freq. Range	Compatibility	
KSGPA22401	50	136-144	TKR740/751 (specify frequency)	\$1,447
KSGPA22402	50	144-152	TKR740/751 (specify frequency)	\$1,447
KSGPA22403	50	152-162	TKR740/751 (specify frequency)	\$1,447
KSGPA22404	50	162-174	TKR740/751 (specify frequency)	\$1,447
KSGPA22501	50	136-144	TKR750 (specify frequency)	\$1,447
KSGPA22502	50	144-152	TKR750 (specify frequency)	\$1,447
KSGPA22503	50	152-162	TKR750 (specify frequency)	\$1,447
KSGPA22504	50	162-174	TKR750 (specify frequency)	\$1,447
KSGPA22411	110	136-144	TKR740/751 (specify frequency)	\$1,999

**Kenwood USA Corporation  
Communications Sector  
Systems Division Product Price Guide**

**Individual Component Items**

**LIST**

Part Number	Output Power	Freq. Range	Compatibility	
KSGPA22412	110	144-152	TKR740/751 (specify frequency)	\$1,999
KSGPA22413	110	152-162	TKR740/751 (specify frequency)	\$1,999
KSGPA22414	110	162-174	TKR740/751 (specify frequency)	\$1,999
KSGPA22511	110	136-144	TKR750 (specify frequency)	\$1,999
KSGPA22512	110	144-152	TKR750 (specify frequency)	\$1,999
KSGPA22513	110	152-162	TKR750 (specify frequency)	\$1,999
KSGPA22514	110	162-174	TKR750 (specify frequency)	\$1,999
KSGPA12420	250	136-174	TKR740/751 (specify frequency)	\$7,791
KSGPA12520	250	136-174	TKR750 (specify frequency)	\$7,791

**UHF**

Part Number	Output Power	Freq. Range	Compatibility	
KSGPA23401	50	406-426	TKR851 (specify frequency)	\$1,389
KSGPA23402	50	426-450	TKR851 (specify frequency)	\$1,389
KSGPA23403	50	450-470	TKR840/851 (specify frequency)	\$1,389
KSGPA23404	50	470-490	TKR840/851 (specify frequency)	\$1,389
KSGPA23405	50	490-512	TKR840/851 (specify frequency)	\$1,389
KSGPA23501	50	406-426	TKR850 (specify frequency)	\$1,389
KSGPA23502	50	426-450	TKR850 (specify frequency)	\$1,389
KSGPA23503	50	450-470	TKR850 (specify frequency)	\$1,389
KSGPA23504	50	470-490	TKR850 (specify frequency)	\$1,389
KSGPA23505	50	490-512	TKR850 (specify frequency)	\$1,389
KSGPA23411	100	406-426	TKR851 (specify frequency)	\$1,926
KSGPA23412	100	426-450	TKR851 (specify frequency)	\$1,926
KSGPA23413	100	450-470	TKR840/851 (specify frequency)	\$1,926
KSGPA23414	100	470-490	TKR840/851 (specify frequency)	\$1,926
KSGPA23415	100	490-512	TKR840/851 (specify frequency)	\$1,926
KSGPA23511	100	406-426	TKR850 (specify frequency)	\$1,926
KSGPA23512	100	426-450	TKR850 (specify frequency)	\$1,926
KSGPA23513	100	450-470	TKR850 (specify frequency)	\$1,926
KSGPA23514	100	470-490	TKR850 (specify frequency)	\$1,926
KSGPA23515	100	490-512	TKR850 (specify frequency)	\$1,926
KSGPA13420	250	406-512	TKR840/851 (specify frequency)	\$11,400
KSGPA13520	250	406-512	TKR850 (specify frequency)	\$11,400

**Kenwood USA Corporation**  
**Communications Sector**  
**Systems Division Product Price Guide**

**Individual Component Items**

LIST

**800 MHz**

Part Number	Output Power	Freq. Range	Compatibility	
KSGPA14041	40	851-869	TKR900	\$2,465
KSGPA14081	80	851-869	TKR900	\$2,901
KSGPA14131	130	851-869	TKR900	\$7,639

**900 MHz**

Part Number	Output Power	Freq. Range	Compatibility	
KSGPA14042	40	935-940	TKR901	\$2,465
KSGPA14082	80	935-940	TKR901	\$2,901
KSGPA14132	130	935-940	TKR901	\$7,639

**Mounting Equipment**

Part Number	Description	
KSGMT13000	3' High, 19" Wide Equipment Rack (Unassembled)	\$712
KSGMT17000	7' High, 19" Wide Equipment Rack (Unassembled)	\$495
KSGMT90001	Rack Standoffs (Kit of 20)	\$76
KSGMT22000	42" (20 U) Locking Cabinet - Standard Perforated Top Lid	\$1,636
KSGMT24000	77" (40 U) Locking Cabinet - Standard Perforated Top Lid	\$2,164
KSGMT20001	Cabinet Solid Top	\$59
KSGMT20002	Cabinet Fan Top	\$433
KSGMT20003	Cabinet Solid Bottom	\$89

**Power Supplies**

Part Number	Description	
KSGMT20200	20A, 13.8VDC Internally mounted power supply for 750/751/850/851	\$247
KSGMT20201	20A, 13.8VDC 19" wide rack mounted power supply for all other models	\$375
KSGPS20400	40A, 13.8VDC 19" wide rack mounted power supply	\$473
KSGPS20402	40A, 13.8VDC 19" wide rack mounted power supply with Smartcharger	\$1,355
KSGPS20701	70A, 13.8VDC 19" wide rack mounted power supply	\$1,355
KSGPS20702	70A, 13.8VDC 19" wide rack mounted power supply with Smartcharger	\$1,736



**Kenwood USA Corporation**  
**Communications Sector**  
**Systems Division Product Price Guide**

**Individual Component Items**

LIST

***Remote Controls***

Part Number	Description	
KSGTN01C	1 Channel Tone Termination Panel with Case	\$607
KSGTN02C	2 Channel Tone Termination Panel with Case	\$677
KSGTN10C	10 Channel Discrete Tone Termination Panel with Case	\$1,213
KSGTN16C	16 Channel BCD Tone Termination Panel with Case	\$910
KSGTDC2C	2 Channel DC Termination Panel with Case	\$326
KSGTALDC	1 Channel 600 Ohm Balanced Audio Line Driver	\$285
KSGMTTR001	19" Rack Mounted 1RU Termination Panel Mounting Tray	\$41

***External Controllers***

Part Number	Description	
KSGCT11040	Raider LTR Dispatch Trunking Controller	\$1,539
KSGCT11050	Marauder LTR Dispatch and Interconnect Trunking Controller	\$2,932
KSGCT20038	Model 038 LTR Repeater Conventional Controller	\$1,197
KSGCT20452	Model 452 LTR Dispatch Trunking Controller	\$1,832
KSGCT20459	Model 459 LTR Dispatch and Interconnect Trunking Controller	\$3,554
KSGCT20827	Model 827 basic MPT-1327 Trunking Controller	\$6,326
KSGCT20844	Model 844 basic MPT-1327 Multi-Site Controller	\$9,917
KSGCT20427	Model 427 basic MPT-1327 Peripheral Equipment Interface	\$9,917

***Duplexers***

Part Number	Description	
KSGDX21556	VHF High Band 6-Cavity BpBr Duplexer, 400KHz Minimum Spacing, 150W	\$3,153
KSGDX34546	UHF 6-Cavity BpBr Duplexer, 3MHz Minimum Spacing, 150W	\$3,153
KSGDX48644	800MHz 4-Cavity BpBr Duplexer, 45MHz Spacing, 150W	\$2,372
KSGDX49644	900MHz 4-Cavity BpBr Duplexer, 39MHz Spacing, 150W	\$2,372

**Kenwood USA Corporation**  
**Communications Sector**  
**Systems Division Product Price Guide**

**Individual Component Items**

LIST

**Modems**

Part Number	Description	
KSGMD10001	Basic Site Management Modem	\$250
KSGMD10002	High Performance Site Management Modem	\$823

**Repeaters**

Part Number	Description	
TKR751	VHF Repeater (includes factory tuning)	\$1,500
TKR851	UHF Repeater (includes factory tuning)	\$1,600

**Other**

Part Number	Description	
KSGVOT1A	Voting Pilot Tone Generator and Line Driver	\$7,487
KSGVOT2A	Voting Pilot Tone Generator and Line Driver	\$1,263
KSGOPTG1	Voting Pilot Tone Generator and Line Driver	\$641
KSGMS10040	External Antenna Relay for 740/840 repeater	\$383
KSGMS10050	External Antenna Relay for 750/751/850/851 repeater (Formerly KSG9010050)	\$340
KSGMS100R1	19" 1RU Blank Face Panel	\$15
KSGMS100R2	19" 2RU Blank Face Panel	\$26
KSGMS100R3	19" 3RU Blank Face Panel	\$38
KSGMS100P1	19" 1RU 6-Outlet Power Strip	\$91
KPG-43	Programming Interface Cable (TK-690)	\$0
KPG-46	Programming Interface Cable for 750/751/850/851 repeater	\$0

Note: Pre-Selectors, Multi-Couplers, and Combiners are available by special order.  
Please contact your Kenwood Systems Regional Sales Manager for more information.

## LOW BAND

### TKB-6900 Series Conventional Simplex Base Stations 29.7 - 50.0 MHz

<b>BASIC CONFIGURATION</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
TKB6900SK1: BASIC CONFIGURATION, 29.7 - 37.0 MHz			
TKB6900SK2: BASIC CONFIGURATION, 35.0 - 43.0 MHz			
TKB6900SK3: BASIC CONFIGURATION, 40.0 - 50.0 MHz			
<b>AMPLIFIER OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGA110B: 100W CONTINUOUS DUTY RF AMPLIFIER UPGRADE			
KSGA130B: 300W CONTINUOUS DUTY RF AMPLIFIER UPGRADE			
<b>POWER SUPPLY OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGPWRX4: DELETE POWER SUPPLY			
KSGPWR74: 13.8 VDC, 70 A POWER SUPPLY, UPGRADE			
KSGPWRB4: 13.8 VDC, 70 A POWER SUPPLY WITH SMARTCHARGER UPGRADE			
<b>MOUNTING CONFIGURATIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK			
KSGMRCK7: 45 RU (7') ALUMINUM EQUIPMENT RACK			
KSGMCAB2: 20 RU (42") LOCKING CABINET			
KSGMCAB4: 40 RU (77") LOCKING CABINET			
KSGMCABT: CABINET SOLID TOP UPGRADE			
KSGMCABF: CABINET FAN TOP UPGRADE			
KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE			
<b>REMOTE CONTROLS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGTN02B: 2 CHANNEL TONE TERMINATION PANEL UPGRADE			
KSGTN10B: 10 CHANNEL TONE DISCRETE TERMINATION PANEL UPGRADE			
KSGTN16B: 16 CHANNEL TONE BCD TERMINATION PANEL UPGRADE			
KSGTDC1B: 1 CHANNEL DC TERMINATION PANEL OPTION			
KSGTALD2: 600 Ohm BALANCED AUDIO LINE DRIVER			
<b>MISC STATION OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGVOT1A: SIGNAL-TO-NOISE VOTER			
KSGVOT2A: ADDITIONAL STATION MODULE			
KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER			
KSGOCWID: MORSE CODE IDENTIFIER			

Extended Total \_\_\_\_\_

## VHF High Band

### TKR-7400 Series High Performance Base Stations and Repeaters 136 - 174 MHz

<b>BASIC CONFIGURATION</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
TKR7400SK1: BASIC CONFIGURATION, 146 - 162 MHz			
TKR7400SK2: BASIC CONFIGURATION, 158 - 174 MHz			
TKR7400SK3: BASIC CONFIGURATION, 136 - 150 MHz			
<b>AMPLIFIER OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGA204S: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA204C: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
KSGA211S: 110W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA211C: 110W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
KSGA225R: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA225B: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
<b>POWER SUPPLY OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGPWRX2: DELETE POWER SUPPLY			
KSGPWR72: 13.8 VDC, 70 A POWER SUPPLY, UPGRADE			
KSGPWRB2: 13.8 VDC, 70 A POWER SUPPLY WITH SMARTCHARGER UPGRADE			
<b>MOUNTING CONFIGURATIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK			
KSGMRCK7: 45 RU (7') ALUMINUM EQUIPMENT RACK			
KSGMCAB2: 20 RU (42") LOCKING CABINET			
KSGMCAB4: 40 RU (77") LOCKING CABINET			
KSGMCABT: CABINET SOLID TOP UPGRADE			
KSGMCABF: CABINET FAN TOP UPGRADE			
KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE			
<b>REMOTE CONTROLS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGTN01A: 1 CHANNEL TONE TERMINATION PANEL			
KSGTN02A: 2 CHANNEL TONE TERMINATION PANEL			
KSGTN10A: 10 CHANNEL DISCRETE TONE TERMINATION PANEL			
KSGTN16A: 16 CHANNEL BCD TONE TERMINATION PANEL			
KSGTDC2A: 2 CHANNEL DC TERMINATION PANEL			
KSGTALD1: 600 Ohm BALANCED AUDIO LINE DRIVER			
<b>TRUNKING CONTROLLER OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGC040L: LTR DISPATCH TRUNKING CONTROLLER			
KSGC050L: LTR DISPATCH & INTERCONNECT TRUNKING CONTROLLER			
KSGC452L: LTR DISPATCH TRUNKING CONTROLLER			
KSGC459L: LTR DISPATCH & INTERCONNECT TRUNKING CONTROLLER			
KSGC807M: BASIC MPT-1327 TRUNKING CONTROLLER			
KSGC827M: BASIC MPT-1327 TRUNKING CONTROLLER			
KSGC844M: BASIC MPT-1327 MULTI-SITE CONTROLLER			
KSGC427M: BASIC MPT-1327 PERIPHERAL EQUIPMENT INTERFACE			
<b>MISC STATION OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGD2P1B: 6 CAVITY BpBr DUPLEXER, 400KHz MINIMUM SPACING, 150W			
KSGOMOD1: BASIC SITE MANAGEMENT MODEM			
KSGOMOD2: HIGH PERFORMANCE SITE MANAGEMENT MODEM			
KSGVOT1A: SIGNAL-TO-NOISE VOTER			
KSGVOT2A: ADDITIONAL STATION MODULE			
KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER			

**Extended Total** \_\_\_\_\_

**VHF High Band**  
**TKR-7500 Series Base Stations and Repeaters**  
**136 - 174 MHz**

<b>BASIC CONFIGURATION</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
TKR7510SK1: BASIC CONFIGURATION, 146 - 174 MHz			
TKR7500SK2: BASIC CONFIGURATION, 136 - 146 MHz			
<b>AMPLIFIER OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGA204R: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA204B: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
KSGA211R: 110W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA211B: 110W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
KSGA225R: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA225B: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
<b>POWER SUPPLY OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGPWRX2: DELETE POWER SUPPLY			
KSGPWR72: 13.8 VDC, 70 A POWER SUPPLY, UPGRADE			
KSGPWRB2: 13.8 VDC, 70 A POWER SUPPLY WITH SMARTCHARGER UPGRADE			
<b>MOUNTING CONFIGURATIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK			
KSGMRCK7: 45 RU (7') ALUMINUM EQUIPMENT RACK			
KSGMCAB2: 20 RU (42") LOCKING CABINET			
KSGMCAB4: 40 RU (77") LOCKING CABINET			
KSGMCABT: CABINET SOLID TOP UPGRADE			
KSGMCABF: CABINET FAN TOP UPGRADE			
KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE			
<b>REMOTE CONTROLS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGTN01A: 1 CHANNEL TONE TERMINATION PANEL			
KSGTN02A: 2 CHANNEL TONE TERMINATION PANEL			
KSGTN10A: 10 CHANNEL DISCRETE TONE TERMINATION PANEL			
KSGTN16A: 16 CHANNEL BCD TONE TERMINATION PANEL			
KSGTDC2A: 2 CHANNEL DC TERMINATION PANEL			
KSGTALD1: 600 Ohm BALANCED AUDIO LINE DRIVER			
<b>TRUNKING CONTROLLER OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGC040L: LTR DISPATCH TRUNKING CONTROLLER			
KSGC050L: LTR DISPATCH & INTERCONNECT TRUNKING CONTROLLER			
KSGC452L: LTR DISPATCH TRUNKING CONTROLLER			
KSGC459L: LTR DISPATCH & INTERCONNECT TRUNKING CONTROLLER			
KSGC807M: BASIC MPT-1327 TRUNKING CONTROLLER			
KSGC827M: BASIC MPT-1327 TRUNKING CONTROLLER			
KSGC844M: BASIC MPT-1327 MULTI-SITE CONTROLLER			
KSGC427M: BASIC MPT-1327 PERIPHERAL EQUIPMENT INTERFACE			
<b>MISC STATION OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGD2P1B: 6 CAVITY BpBr DUPLEXER, 400KHz MINIMUM SPACING, 150W			
KSGOMOD1: BASIC SITE MANAGEMENT MODEM			
KSGOMOD2: HIGH PERFORMANCE SITE MANAGEMENT MODEM			
KSGVOT1A: SIGNAL-TO-NOISE VOTER			
KSGVOT2A: ADDITIONAL STATION MODULE			
KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER			

**Extended Total** \_\_\_\_\_

**UHF**

**TKR-8400 Series High Performance Base Stations and Repeaters  
450-512 MHz**

<b>BASIC CONFIGURATION</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
TKR8400SK1: BASIC CONFIGURATION, 450 - 480 MHz			
TKR8400SK2: BASIC CONFIGURATION, 480 - 512 MHz			
<b>AMPLIFIER OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGA304S: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA304C: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
KSGA310S: 100W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA310C: 100W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
KSGA325R: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA325B: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
<b>POWER SUPPLY OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGPWRX2: DELETE POWER SUPPLY			
KSGPWR72: 13.8 VDC, 70 A POWER SUPPLY, UPGRADE			
KSGPWRB2: 13.8 VDC, 70 A POWER SUPPLY WITH SMARTCHARGER UPGRADE			
<b>MOUNTING CONFIGURATIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK			
KSGMRCK7: 45 RU (7') ALUMINUM EQUIPMENT RACK			
KSGMCAB2: 20 RU (42") LOCKING CABINET			
KSGMCAB4: 40 RU (77") LOCKING CABINET			
KSGMCABT: CABINET SOLID TOP UPGRADE			
KSGMCABF: CABINET FAN TOP UPGRADE			
KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE			
<b>REMOTE CONTROLS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGTN01A: 1 CHANNEL TONE TERMINATION PANEL			
KSGTN02A: 2 CHANNEL TONE TERMINATION PANEL			
KSGTN10A: 10 CHANNEL DISCRETE TONE TERMINATION PANEL			
KSGTN16A: 16 CHANNEL BCD TONE TERMINATION PANEL			
KSGTDC1A: 1 CHANNEL DC TERMINATION PANEL			
KSGTALD1: 600 Ohm BALANCED AUDIO LINE DRIVER			
<b>TRUNKING CONTROLLER OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGC040L: LTR DISPATCH TRUNKING CONTROLLER			
KSGC050L: LTR DISPATCH & INTERCONNECT TRUNKING CONTROLLER			
KSGC452L: LTR DISPATCH TRUNKING CONTROLLER			
KSGC459L: LTR DISPATCH & INTERCONNECT TRUNKING CONTROLLER			
KSGC807M: BASIC MPT-1327 TRUNKING CONTROLLER			
KSGC827M: BASIC MPT-1327 TRUNKING CONTROLLER			
KSGC844M: BASIC MPT-1327 MULTI-SITE CONTROLLER			
KSGC427M: BASIC MPT-1327 PERIPHERAL EQUIPMENT INTERFACE			
<b>MISC STATION OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGD3P1B: 6 CAVITY BpBr DUPLEXER, 3MHz MINIMUM SPACING, 125W			
KSGOMOD1: BASIC SITE MANAGEMENT MODEM			
KSGOMOD2: HIGH PERFORMANCE SITE MANAGEMENT MODEM			
KSGVOT1A: SIGNAL-TO-NOISE VOTER			
KSGVOT2A: ADDITIONAL STATION MODULE			
KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER			

Extended Total \_\_\_\_\_

**UHF**

**TKR-8500 Series Base Stations and Repeaters**  
**400 - 430 MHz and 450 - 512 MHz**

<b>BASIC CONFIGURATION</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
TKR8510SK1: BASIC CONFIGURATION, 450 - 480 MHz			
TKR8500SK2: BASIC CONFIGURATION, 480 - 512 MHz			
TKR8500SK3: BASIC CONFIGURATION, 400 - 430 MHz			
<b>AMPLIFIER OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGA304R: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA304B: 40W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
KSGA310R: 100W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA310B: 100W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
KSGA325R: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR REPEATER STATION			
KSGA325B: 250W CONTINUOUS DUTY RF AMPLIFIER UPGRADE FOR BASE STATION			
<b>POWER SUPPLY OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGPWRX2: DELETE POWER SUPPLY			
KSGPWR72: 13.8 VDC, 70 A POWER SUPPLY, UPGRADE			
KSGPWRB2: 13.8 VDC, 70 A POWER SUPPLY WITH SMARTCHARGER UPGRADE			
<b>MOUNTING CONFIGURATIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK			
KSGMRCK7: 45 RU (7") ALUMINUM EQUIPMENT RACK			
KSGMCAB2: 20 RU (42") LOCKING CABINET			
KSGMCAB4: 40 RU (77") LOCKING CABINET			
KSGMCABT: CABINET SOLID TOP UPGRADE			
KSGMCABF: CABINET FAN TOP UPGRADE			
KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE			
<b>REMOTE CONTROLS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGTN01A: 1 CHANNEL TONE TERMINATION PANEL			
KSGTN02A: 2 CHANNEL TONE TERMINATION PANEL			
KSGTN10A: 10 CHANNEL DISCRETE TONE TERMINATION PANEL			
KSGTN16A: 16 CHANNEL BCD TONE TERMINATION PANEL			
KSGTDC1A: 1 CHANNEL DC TERMINATION PANEL			
KSGTALD1: 600 Ohm BALANCED AUDIO LINE DRIVER			
<b>TRUNKING CONTROLLER OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGC040L: LTR DISPATCH TRUNKING CONTROLLER			
KSGC050L: LTR DISPATCH & INTERCONNECT TRUNKING CONTROLLER			
KSGC452L: LTR DISPATCH TRUNKING CONTROLLER			
KSGC459L: LTR DISPATCH & INTERCONNECT TRUNKING CONTROLLER			
KSGC807M: BASIC MPT-1327 TRUNKING CONTROLLER			
KSGC827M: BASIC MPT-1327 INTERCONNECT CONTROLLER			
KSGC844M: BASIC MPT-1327 MULTI-SITE CONTROLLER			
KSGC427M: BASIC MPT-1327 PERIPHERAL EQUIPMENT INTERFACE			
<b>MISC STATION OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGD3P1B: 6 CAVITY BpBr DUPLEXER, 3MHz MINIMUM SPACING, 125W			
KSGOMOD1: BASIC SITE MANAGEMENT MODEM			
KSGOMOD2: HIGH PERFORMANCE SITE MANAGEMENT MODEM			
KSGVOT1A: SIGNAL-TO-NOISE VOTER			
KSGVOT2A: ADDITIONAL STATION MODULE			
KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER			

**Extended Total** \_\_\_\_\_



**800 - 900 MHz**  
**TKR-9300 and TKR-9301 Series Repeaters**

<b>BASIC CONFIGURATION</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
TKR9300SK1 800 MHz BASIC TRANSCEIVER 806-821 / 851-866 MHz			
TKR9300SK2 800 MHz BASIC TRANSCEIVER 821-824 / 866-869 MHz (NPSPAC)			
TKR9301SK1 900 MHz BASIC TRANSCEIVER 896-901 / 935-940 MHz			
<b>AMPLIFIER OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGA404A: 40W CONTINUOUS DUTY 800MHz RF AMPLIFIER UPGRADE			
KSGA404B: 40W CONTINUOUS DUTY 900MHz RF AMPLIFIER UPGRADE			
KSGA408A: 80W CONTINUOUS DUTY 800MHz RF AMPLIFIER UPGRADE			
KSGA408B: 80W CONTINUOUS DUTY 900MHz RF AMPLIFIER UPGRADE			
KSGA413A: 130W CONTINUOUS DUTY 800MHz RF AMPLIFIER UPGRADE			
KSGA413B: 130W CONTINUOUS DUTY 900MHz RF AMPLIFIER UPGRADE			
<b>POWER SUPPLY OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGPWRX2: DELETE POWER SUPPLY			
KSGPWR72: 13.8 VDC, 70 A POWER SUPPLY, UPGRADE			
KSGPWRB2: 13.8 VDC, 70 A POWER SUPPLY WITH SMARTCHARGER UPGRADE			
<b>MOUNTING CONFIGURATIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGMRCK3: 17 RU (3') ALUMINUM EQUIPMENT RACK			
KSGMRCK7: 45 RU (7') ALUMINUM EQUIPMENT RACK			
KSGMCAB2: 20 RU (42") LOCKING CABINET			
KSGMCAB4: 40 RU (77") LOCKING CABINET			
KSGMCABT: CABINET SOLID TOP UPGRADE			
KSGMCABF: CABINET FAN TOP UPGRADE			
KSGMCABB: CABINET INTERIOR SOLID BOTTOM UPGRADE			
<b>REMOTE CONTROLS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGTN01A: 1 CHANNEL TONE TERMINATION PANEL			
KSGTDC2A: 1 CHANNEL DC TERMINATION PANEL			
KSGTALD1: 600 Ohm BALANCED AUDIO LINE DRIVER			
<b>EXTERNAL CONTROLLER OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGC038L: REPEATER PANEL CONTROLLER			
KSGC040L: LTR DISPATCH TRUNKING CONTROLLER			
KSGC050L: LTR DISPATCH & INTERCONNECT TRUNKING CONTROLLER			
KSGC452L: LTR DISPATCH TRUNKING CONTROLLER			
KSGC459L: LTR DISPATCH & INTERCONNECT TRUNKING CONTROLLER			
<b>MISC STATION OPTIONS</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Extended</b>
KSGD4P1A: 4 CAVITY 800MHz BpBr DUPLEXER, 45MHz SPACING, 150W			
KSGD4P1B: 4 CAVITY 900MHz BpBr DUPLEXER, 39MHz SPACING, 150W			
KSGOMOD1: BASIC SITE MANAGEMENT MODEM			
KSGOMOD2: HIGH PERFORMANCE SITE MANAGEMENT MODEM			
KSGVOT1A: SIGNAL-TO-NOISE VOTER			
KSGVOT2A: ADDITIONAL STATION MODULE			
KSGOPTG1: PILOT TONE GENERATOR AND LINE DRIVER			

**Extended Total** \_\_\_\_\_